

09/739,265

**REMARKS**

Claims 6 and 16 are independent and stand rejected under 35 U.S.C. § 103 as being unpatentable over APA in view of O'Neill. This rejection is respectfully traversed for the following reasons.

Claim 6 recites in pertinent part, "a ring buffer, which acts as one ring, having a plurality of address locations for storing incoming data; a first boundary pointer *for indicating an end point of a first buffer area* formed within said ring buffer into which said incoming data can be stored; ... a first read pointer ... *for indicating a read address of said first buffer area*; ... wherein ... each of said first read pointer, first write pointer, second read pointer, second write pointer, said first boundary pointer and said second boundary pointer, is *capable of changing in a circulating fashion within the plurality of address locations of the ring buffer*" (emphasis added). Claim 16 defines a similar feature in method format.

As a preliminary matter, it is respectfully submitted that the Examiner's allegation that APA discloses the claimed "boundary pointer" and "read pointer" as a combined read/boundary pointer is improper because the Examiner fails to consider limitations which follow the *distinctly* claimed elements. For example, the claimed first boundary pointer is "for indicating an end point of a first buffer area formed within said ring buffer into which said incoming data can be stored." In contrast, the combined read/boundary pointer of APA merely indicates the beginning address for the next data to be read (i.e., boundary between next data to be read and data already read). The combined read/boundary pointer of APA does not indicate an end point of a first buffer area.

09/739,265

Turning to the present invention, because the boundary pointer is separated from the read pointer and write pointer, the boundary pointer of the present invention can indicate which address locations belong to which buffer area *even if no data is written therein* (see Fig. 4A of Applicant's drawings). However, turning to APA, because the alleged boundary pointer is not separated from the read and write pointer, if no data is written in the ring buffer (see Fig. 1A of Applicants' drawings), it can not be determined which address locations belong to the first buffer area or second buffer area.

Accordingly, it is respectfully submitted that the Examiner's reliance on the combined read/boundary pointer of APA as the distinctly claimed "read pointer" and "boundary pointer" is improper because the combined read/boundary pointer of APA does not satisfy the functional limitations, defining the structure recited in the claims, corresponding to the boundary and read pointer, respectively.

Moreover, it is respectfully submitted that O'Neill does not obviate the deficiencies of APA. In this regard, it appears the Examiner may have misinterpreted Applicant's previously filed arguments. Specifically, Applicant argued that O'Neill does not disclose the *combination* of a separate boundary pointer which is capable of changing in a circulating fashion, rather than just arguing that O'Neill does not disclose a separate boundary pointer *per se*. In other words, none of the cited prior art, alone or in combination, discloses or suggests a distinct boundary pointer which changes in a circulating fashion. APA does not disclose a boundary pointer which indicates an end point of a first buffer area, and O'Neill does not disclose a boundary pointer which can change in a circulating fashion.

09/739,265

Accordingly, if the alleged "boundary pointer" of APA was replaced with the one taught by O'Neill, the resulting combination would not disclose a boundary pointer capable of changing in a circulating fashion. Alternatively, if the alleged "boundary pointer" of O'Neill was replaced with the one taught by APA, the resulting combination would not disclose a boundary pointer indicating an end point of a first buffer area.

Furthermore, there is no suggestion or motivation derived from the prior art to modify APA with only the "separate boundary pointer" teaching of O'Neill without the "non-circulating functionality" thereof. Indeed, because O'Neill is directed to a memory array where each of the address locations acts as one ring buffer so that the memory as a whole does not act as one ring buffer, the disclosed boundary pointers of O'Neill are necessary components to separate the respective address locations in such a multi-buffer arrangement. However, as APA is directed to a whole memory acting as one ring buffer opposite to the arrangement disclosed in O'Neill, there is no *disclosed* need or desire for including *separate* boundaries. The alleged motivation of adjusting buffer sizes used to modify APA would already naturally occur as a result of the movement of the read/write pointers of APA in response to the data demand, *without the need for separate boundary pointers*. Only Applicant has provided the requisite motivation for a buffer acting as one ring to include the combination of separated pointers with adjustable boundaries.

The Examiner is directed to MPEP § 2143.01 under the subsection entitled "Fact that the Claimed Invention is Within the Capabilities of One of Ordinary Skill in the Art is Not Sufficient by Itself to Establish *Prima Facie* Obviousness", which sets forth the applicable standard:

A statement that modifications of the prior art to meet the claimed invention would have been [obvious] because the references relied upon

09/739,265

teach that all aspects of the claimed invention were *individually* known in the art is *not* sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. (citing *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993)).

In the instant case, even assuming *arguendo* that APA and O'Neill "teach that all aspects of the claimed invention [are] individually known in the art", it is submitted that such a conclusion "is not sufficient to establish a *prima facie* case of obviousness" because there is no *objective* reason on the record to combine the teachings of the cited prior art in the manner suggested by the Examiner.

Accordingly, neither APA nor O'Neill, alone or in combination, disclose or suggest the claimed combinations. The Examiner is directed to MPEP § 2143.03 under the section entitled "All Claim Limitations Must Be Taught or Suggested", which sets forth the applicable standard:

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (citing *In re Royka*, 180 USPQ 580 (CCPA 1974)).

In the instant case, the pending rejection does not "establish *prima facie* obviousness of [the] claimed invention" as recited in claims 6 and 16 because the proposed combination fails the "all the claim limitations" standard required under § 103.

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as the independent claims are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is

**09/739,265**

respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

Based on all the foregoing, it is submitted that all pending claims are patentable over the cited prior art. Accordingly, it is respectfully requested that the pending rejections be withdrawn.

### CONCLUSION

Having fully and completely responded to the Office Action, Applicants submit that all of the claims are now in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

MCDERMOTT WILL & EMERY LLP



Ramyar M. Farid  
Registration No. 46,692

600 13<sup>th</sup> Street, N.W.  
Washington, DC 20005-3096  
(202) 756-8000 RMF:MWE  
Facsimile: (202) 756-8087  
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